

UNITED STATES DEPARTMENT OF AGRICULTURE,
STATES RELATIONS SERVICE.

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HOW TEACHERS IN RURAL ELEMENTARY SCHOOLS MAY USE
FARMERS' BULLETIN 711, THE CARE AND IMPROVEMENT
OF THE WOOD LOT.

Range for use.—States east of and including Minnesota and Texas, sections where there are farm wood lots.

Relation to the course of study.—Material in this bulletin will be of use in the study of farm management and forestry in elementary agriculture, in botany and nature study, also by correlation in other school subjects.

Topics for study.—(1) Essentials of a good wood lot; species adapted to the locality, rate of growth, value for wood and lumber, etc.; pages 1-8. (2) Improvement and care; cuttings, cleanings, thinnings, pasturing, and protection; pages 9-18. (3) Perpetuation and regeneration; by seed, by sprouts, artificial sowing or planting; pages 19-24. These topics should be taught when the application is most seasonal.

Study questions.—Topic 1. What is the chief aim of the farm wood lot? What has the density of stand to do with the quality of timber? How dense a stand is desirable? Compare some local wood lots with the stocking table on page 2. What species of timber are native to your district? What species not listed on page 3 are found in local wood lots? Were they introduced naturally or artificially? Which local species are favored for building timber? For furniture? For firewood? Which are commonly planted in reforestation? Discuss other merits of any species.

Topic 2. In what different ways may wood lots need improvement? What should be done in cases where old trees predominate? How secure a natural reproduction in such cases? What are the different types of improvement cuttings? In making "cleanings" what should be removed? Why does it pay to do this? When are "thinnings" needed? What trees should be selected in thinning? What use may be made of the trees thinned out? What are liberation cuttings and why necessary? What harm may vines do in the wood lot? Discuss the harm done by pasturing wood lots and compare this with the value of the pasturage. What different forms of damage result from fires in the wood lot? What evidences may there be of damage by insects or fungi? How may the farmer obtain advice about these pests? What methods of cutting and logging the timber will best preserve the younger growth? To what extent do local farmers use good methods?

Topic 3. How encourage the growth of young trees to replace old growth? How assist in the natural seeding? In what cases will reproduction by sprouts be feasible and what advantages has this method? In what cases may artificial planting or seeding be preferable? Where and how should new wood lots be established? To what extent are new seedlings or plantings needed in the district?

That arrangement has your State for furnishing seedlings for farm planting? Is there waste land in the district which should be forested? (See Farmers' Bulletin No. 745.)

Illustrative material.—Have the pupils assist in procuring specimens for a school collection to include for each species of tree: Typical leaves, flowers and fruit, trunk, bark, twigs, sections of wood to show various grains and polished specimens. Pictures may be obtained to show branching habits and forms of trees either by sketches or as printed material. Consult the county superintendent of schools or the State forester as to sources of such pictures. Pictures from farm papers will show good and poor methods of wood-lot practice. The Forest Service of the U. S. Department of Agriculture loans photographs of forest conditions and forest work, collections of commercially important woods and related data, and sets of lantern slides with accompanying lecture outlines to responsible parties at the cost of transportation only. Details may be learned by addressing the Forester, U. S. Department of Agriculture, Washington, D. C.

Practical exercises.—Prepare specimens of woods at school. Have the class plant trees as a windbreak or a background for the school (with the permission of the school officials). Where forest nurseries are available they should be visited or, in the absence of this opportunity, it may be possible to learn nursery methods at commercial ornamental and fruit-tree nurseries. Have the pupils inquire at each farm in the district and report for each the acreage of the wood lot, the number of trees to the acre, the age of trees, species found, methods of care, undesirable practice observed, average rate of cutting, use of wood and lumber on farm, wood and lumber sold, rates of prices, and total income from this source, market conditions and best markets available, amount of seeding or planting done, area needing planting to trees.

Correlations.—Arithmetic problems will arise in compiling the survey data and also by applications of the tables on pages 2, 5, and 23. The measuring of wood-lot products is dealt with in Farmers' Bulletin No. 715. Compute for actual rather than imaginary cases where possible. In geography classes locate the wood lots on the map of the district, indicate on the State map the factories which use local wood products. Find what sections use most of the lumber from this section, the routes of transportation, uses and manufacture at its destination, competing sections.

Civics studies include names of forest wardens; their duties; the State laws on forest protection; the duty of each citizen in this particular; the name, location, salary, and duties of the State forester. Obtain from the State forester all the material furnished by his office for the use of schools. Drawings to show the branching habits and other features of trees of local importance may be made with sufficient accuracy to make a valuable collection for illustrative material.

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